

What is Claimed is:

1. In a system including a plurality of PCI segments, with each said PCI segment comprising one or more PCI cards mounted in slots on a PCI chassis, a bridge for coupling PCI segments, said bridge comprising:

a board; and

a plurality of connectors mounted on said board for electrically connecting said board to a first and a second PCI segment on a backplane of the PCI chassis.

2. A bridge in accordance with claim 1, wherein:

said plurality of connectors are J1 and J2 connectors.

3. A bridge in accordance with claim 1, wherein:

said board has four connectors for connection to the P1 and P2 groups of pins of said first and second PCI segments.

4. A bridge in accordance with claim 1, further comprising:

a processor mounted on said board and electrically connected to said plurality of

connectors, wherein said processor logically connects said first and second PCI segments with a transparent bridge.

5. A bridge in accordance with claim 1, further comprising:  
a processor mounted on said board and electrically connected to said plurality of connectors, wherein said processor logically connects said first and second PCI segments with a non-transparent bridge.

6. A bridge in accordance with claim 1, wherein:  
said board electrically connects to said first and said second PCI segments in adjacent slots on the PCI chassis.

7. A bridge in accordance with claim 1, wherein:  
said board electrically connects to said first and said second PCI segments in non-adjacent slots on the PCI chassis.

8. A bridge in accordance with claim 1, wherein:  
said board is configured to mount on said backplane of the PCI chassis in the slot occupied by a transition card.

1 9. A bridge in accordance with claim 1, wherein:

2 said plurality of connectors connect only to groups of P1 and P2 pins.

1 10. In a system including at least three PCI segments, with each PCI segment  
2 comprising one or more PCI cards mounted in slots on a PCI chassis, a bridge for  
3 connecting to PCI segments, said bridge comprising:

4 a first board;

5 a plurality of first board connectors mounted on said first board for electrically  
6 connecting said first board to a first and a second PCI segment on the backplane of the  
7 PCI chassis;

8 a second board;

9 a plurality of second board connectors mounted on said second board for  
10 electrically connecting said second board to said second and a third PCI segment on the  
11 backplane of the PCI chassis.

1 11. A bridge in accordance with claim 10, further comprising:

2 a first processor mounted on said first board and electrically connected to said  
3 plurality of first board connectors;

4 a second processor mounted on said second board and electrically connected to  
5 said plurality of second board connectors; and

6 wherein said first processor and said second processor logically connect said first,  
7 said second, and said third PCI segments with a transparent bridge.

1 12. A bridge in accordance with claim 10, further comprising:

2 a first processor mounted on said first board and electrically connected to said  
3 plurality of first board connectors;

4 a second processor mounted on said second board and electrically connected to  
5 said plurality of second board connectors; and

6 wherein said first processor and said second processor logically connect said first,  
7 said second, and said third PCI segments with a non-transparent bridge.

1 13. A bridge in accordance with claim 10, wherein:

2 said first board and said second board are identical; and

3 said first processor and said second processor are identical.

1 14. A method of bridging a plurality of PCI segments mounted on a PCI chassis

2 without occupying a front side slot of said PCI chassis, comprising:

connecting a first PCI segment slot and a second PCI segment slot with a first PCI  
bridge card; and  
locating said PCI bridge card along a backplane.

15. A method in accordance with claim 14, further comprising:  
mounting said PCI bridge card in a notch between the PCI chassis and a transition  
card.

16. A method in accordance with claim 14, further comprising:  
connecting a second PCI segment slot and a third PCI segment slot with a second  
PCI bridge card; and  
locating said PCI bridge card along said backplane.

17. A method in accordance with claim 16, wherein:  
bridging said first, said second, and said third PCI segments with said first and said  
second PCI bridge cards is performed with a transparent bridge.

18. A method in accordance with claim 16, wherein:  
bridging said first, said second, and said third PCI segments with said first and said

3 second PCI bridge cards is performed with a non-transparent bridge.

1 19. A method of bridging PCI segments on a PCI chassis, comprising:  
2 connecting a pair of adjacent PCI segments with a PCI bridge card across the  
3 Groups of P1 and P2 pins on the backplane of a pair of adjacent PCI slots; and  
4 orienting said PCI bridge card substantially parallel to the PCI chassis .

1 20. A method in accordance with claim 19, further comprising:  
2 installing transition cards on the backplane of said pair of adjacent PCI slots  
3 substantially perpendicular to the PCI chassis.  
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